

# Investigating Educational Significance of e-Learning in Nigerian Universities Post-COVID-19: Implications for Assuring Quality e-Assessment

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## **Abstract**

*This paper appraised educational imperative of e-learning in Nigerian universities post-COVID-19. This was with a view to improving the quality of teaching and learning and assuring quality e-assessment in the country. The paper emphasised that e-learning requires a panoply of Information Communication Technology (ICT) tools, which includes course-ware, virtual tutorial rooms, interactive digital whiteboards, smartphones, computers, audiobooks and learners' support among others. Also, the paper argued that incorporation of technology into assessment is inevitable as assessment provides observable evidence of learning and understanding of the curriculum. The paper concluded that though the e-learning method in Nigeria is beset with challenges such as human capacity, a deficiency and unwillingness to change, poor internet connectivity, poor power supply, high cost of internet data, among others, those challenges would ease out with time. Hence, it was recommended that e-learning requires certain behavioural changes and regulatory adjustments to make it work for the learner, as e-learning post-COVID-19 crisis is a good idea whose time has really come.*

**Keywords:** Post-COVID-19, e-Learning, Significance, e-Assessment and University

## **Biography**

Dr. Abdul-Wahab IBRAHIM, is a Psychometrician and Full-Time Senior Lecturer at Department of Education, Faculty of Education, Sule Lamido University, Kafin Hausa, Jigawa State, Nigeria. He received his Ph.D. from the Obafemi Awolowo University, Ile-Ife, Osun State, Nigeria in 2013. He has published over 40 articles in scholarly journals. His research centres on Test Theories (IRT-Quantitative Data), Differential Item Functioning (DIF-Dichotomous & Ordinal Items), Educational Measurement/Statistics, Educational/Programme Evaluation, Research Methodology, Cognitive Psychology, and Entrepreneurship Education.

## **Introduction**

Prior to the outbreak of COVID-19, the mode of educational and instructional delivery in Nigeria was traditional face-to-face method until e-learning was prompted by the COVID-19 pandemic crisis. With the outbreak of COVID-19 pandemic, universities across Nigeria were shutdown. Specifically, there are 172 universities, comprising 43 Federal Universities, 50 State Government-owned universities, and 79 Private-owned universities in Nigeria (National University Commission (NUC), 2019; Ibrahim, 2019). Consequently, the shutdown of universities has meant that the COVID-19 outbreak has affected nothing less than 172 universities, both public and private universities in the country. However, while some privately-owned universities have managed to offer online teaching and learning, many public universities across Nigeria find themselves poorly prepared and unable to mitigate the consequences of COVID-19, culminating in a total shutdown. The huge shock to universities, especially public universities arising from the COVID-19 pandemic has already spurred e-learning as an alternative to face-to-face or in-person teaching and learning. Hence, universities (especially privately-owned universities) across the country have switched almost seamlessly from physical presence to online academic activities and classes.

Suffice to say that there is no Nigerian (government-owned) university today that is operating any form or model of e-learning because of poor internet access, high bandwidth costs, and irregular power supply. Thus, Nigerian public universities do not have such capacity yet. The grim reality is that Nigerian students in government-owned universities would have to face the reality that by the time the COVID-19 crisis is resolved, they would have lost at least a semester or a session. Their academic learning is paused indefinitely. So, students will start from where they stopped once universities resume. For instance, the students have a syllabus to complete and they must complete it. Further, the e-learning lectures are different from face-to-face lectures, as e-learning requires a panoply of Information Communication Technology (ICT) tools, which includes interactive digital whiteboards, use of smartphones, laptop computers and audiobooks. There is also the functionality aspect that borders on stable and affordable internet connectivity, security measures such as filters and site blockers and constant electricity. More important, there is the skill component that includes basic ICT literacy skills, ICT use in pedagogical settings, and discipline-specific uses. In addition, there is a content component namely curriculum design per levels that include courses and loads. Thus, e-learning is not synonymous with WhatsApp conversation, Facebook interaction, Instagram views and other social platforms. The normal assumption is that students should find e-learning suitable and favourable since they are already familiar with technology tools and resources such as iPhone, iPad, PC, YouTube videos, and audiobooks. But surprisingly, the reverse is the case (Ibrahim & Hudu, 2020).

Accordingly, e-learning has its own style. The internet must be sufficient. Students must have browsing phones that can be used in their e-learning classes. Not only that, but also it is admitted that e-learning involves a lot of expertise, especially on the part of the universities and lecturers to set up instructional materials. Against this backdrop, this paper investigates the educational imperative of adopting e-learning and its effect on the quality of e-assessment in Nigerian universities post-COVID-19. This is with a view to improving the quality of teaching and learning and assuring quality e-assessment in the public and privately-owned universities in the country.

### **Concept of e-Learning**

Researchers (Adarkwah, 2020; Okebukola, 2020; Ibrahim, 2020; Ibrahim & Hudu, 2020; Al-Fraihat, Joy & Sinclair, 2020; Eze, Chinedu-Eze & Bello, 2018; Jimba & Ogundele, 2015) in the field of Information Communication and Technology (ICT), Science Education and Educational Psychology have defined e-learning in many ways such as technology-based teaching and learning, online teaching and learning, internet teaching and learning, and virtual teaching and learning, computer-based learning, on-line self-study, encompassing on-going learning and joint effort, to mention only a few (Ibrahim, 2020).

Academic Staff Union of Universities (ASUU) (2020) defined e-learning as a type of learning that depends entirely on internet-based resources and support system. Jimba & Ogundele (2015) described e-learning as a form of formal and informal education that uses electronic delivery methods such as internet-based learning delivery packages, CD-ROM, online video conferencing, websites or e-mail to manage the relationship between teacher and learners. Al-Fraihat et al., (2020) used the term e-learning to refer to organised aspect of instructional delivery, and numerous other theorists have adhered to this usage. Regardless of terminology, in this paper, the term e-learning is used consistently to label the totality of all forms of electronically supported teaching and learning. The information and communication systems, whether networked or not, serve as specific media to implement the learning process. In other words, e-learning is utilizing electronic technologies to access educational curriculum outside of the normal classroom environment by delivering teaching through online platforms. Therefore, the term will still be used to reference out-of-classroom and in-classroom educational experiences via technology, even as advances continue in regard to devices and curriculum (Ibrahim, 2020).

In the same vein, Okereke, Williams, Emmanuella, Ashinedu, and Mairaj (2020) conceptualized e-learning as the use of electronic media and/or the internet to facilitate virtual learning and instruction. The communication process between instructors and learners is often computer-assisted with the use of a variety of technologies like laptops, smartphones, tablets and a host of others. Due to the widespread availability

of these devices in developed countries, effective education comparable to face-to-face learning has been achieved over the years since the advent of the internet from the 1990s. The systems are majorly driven by quality, information quality, service quality, user satisfaction (trainers and learners), usefulness, and acceptance of the technology.

### **Media of e-Learning Teaching Process**

According to Okebukola (2020), e-learning is not only about use of Zoom and WhatsApp, but includes use of course-ware, digital library resources, assignments, quizzes\tests, virtual tutorial rooms; learners support, among others. Similarly, Jimba & Ogundele (2015) explained that e-learning process can be facilitated through the use of computers, computing laboratories, lecture theatres, video conferencing and internet access. It is revealed that one can study whenever s/he wishes irrespective of whether it is day or night or the location. Donald (2019) asserted that e-learning process includes any device available to students for use in learning in a more efficient and stimulating manner than the sole use of teacher's voice.

Akindele and Ogunlade (2016) opined that e-learning facilities are valuable tools for learning with computer technology playing a central role in the art of teaching and learning. To Olasupo (2017) e-learning resources include all media of mass communication like radio, television, computers, internet, telephone, slide projector, teleconferencing, laptop, and a host of others. Eze et al., (2018) elucidated that e-learning involves technology mediated and digitally empowered learning that utilizes hardware, for example, PCs, tablets, printer, digital camera, digital videos, scanner, overhead projector; OHP, and OHP screen; software, for example, operating systems, cloud technologies, applications (apps), writing, editing, MS Office) and (CD textbooks that fall in the category of courseware, OERS, e-content) and others (e.g., USB drives, CD-ROM), whether from a distance or face-to-face classroom setting (PC helped learning), to empower teacher to student interactions.

### **Educational Significance of e-Learning in Nigerian Universities Post-COVID-19**

The adoption of e-learning is not new in developed countries, it is novel in Nigeria and have come to stay post-COVID-19. Before now, the only resemblance of online teaching and learning programme was the distance education programme run by a few universities in the country. However, no real e-learning takes place, as students are required to visit the universities periodically and are provided with materials which they take home for further studies. Most importantly, e-learning has become a new normal for universities' survival post-COVID-19, and that any university that fails to develop capacity to work along that direction would be left behind. In the midst of COVID-19 pandemic, the only way for universities in Nigeria, especially government-owned universities to remain relevant and effective in performing their roles after the

coronavirus crisis is to embrace wholly e-learning. According to Eze et al., (2018), although most government-owned universities have attempted to build ICT based centres for e-learning adoption, most of these established centres are web-based centres without adequate e-learning facilities.

Noteworthy, the creation of an e-learning would enhance the level of e-participation, and e-readiness of the undergraduate for the employment market. In particular, e-learning bridges the divide between the developed and the developing nations. It is no wonder that Nigerian private universities now continue with their academic session despite the COVID-19 disruption. However, publicly-owned universities are largely dinosaur-years behind. For instance, in countries like the United States of America, the United Kingdom, South Korea, and China, among others, online university education has continued seamlessly. The closure of universities in Nigeria have disrupted the learning of students and have deprived students' opportunities for growth and development. E-learning emerged as an ultimate response to the disruption in education due to the COVID-19 lockdown of universities.

Falola (2020) words are apposite here:

*The imperative and advanced use of ICT in every aspect of daily life has become the norm in developed countries of the world. ICT apps/media, especially WhatsApp, Zoom, Google Meet, Webinar, and Telegram, are some of the most veritable platforms used for academic purposes, serving both audio and audio-visual communications. Indeed, these media have been adopted in leading private universities in the country such as Babcock University, Covenant University, Bowen University, Benson Idahosa University, Afe Babalola University, American University of Nigeria, and Crawford University, amongst many others. With the aid of these technologies, while students of government-controlled universities remain at home, their colleagues in private universities only experience the impact of COVID-19 by communicating with their lecturers and friends via social media and not physically anymore. With the state of the 21st-century technology, how could anyone explain or understand that one of the renowned federal universities could not provide students with their transcripts because of the COVID-19 lockdown? Put differently, private universities have swiftly adopted virtual/online learning - fully integrating their students into an academic process that ensures that the impact of COVID-19 has not been able to stunt the academic progress of their students, thereby delaying them at all (p.12).*

In the same vein, Adeoye, Adanikin & Adanikin (2020) expressed that e-learning reduces the issues of insufficient classrooms for lectures, serves as a platform for students to interact with themselves, allows students to study at their open pace and convenience as the lecture material is readily available and the content delivery of the lecturer is quite accessible to them. Hence, it increases satisfaction and decreases stress. Therefore, e-learning exposes lecturers and students to the reality of the world outside the classroom since the world is a global web. Conclusively, e-learning helps to improve the quality of teaching by making lecture notes available on the intranet, lecturer-student interaction, accessibility to teaching materials, and reduce student's idle time. The system helps in no small measure to correct the problems plaguing the educational sector, such as examination malpractice, decline standards of education and cultism, as students are gainfully engaged in academic and social activities.

### **Challenges of Adopting e-Learning in Nigerian Universities Post-COVID-19**

Noteworthy, e-learning especially in developing countries including Nigeria, is beset with challenges such as human capacity, a deficiency and unwillingness to change, poor internet connectivity, poor power supply, high cost of internet data, among others, those challenges would ease out with time. Adarkwah (2020) identified high cost, inadequate infrastructure, lack of ICT skills, rejection of e-learning by faculty members, and lack of accessibility to quality internet connection and electricity as barriers to the adoption of e-learning in developing countries. He concluded that technology and gadgets needed to make learning effective may not be cheap, affecting the online process negatively. Limited funding can affect institutions from hosting online learning. Online education may cost more to develop and deliver than face-to-face courses.

A student may be part of the online learning but may not actively use the service or follow the tutor (Bean, Aldredge, Chow, Fowler, Guaracha, & McGinnis, 2019). On the other hand, e-learning has the potential of resulting in a lack of social and communication skills due to the absence of student-student interaction and student-teacher engagement (Okereke et al., 2020). Similarly, Ibrahim (2020) observed that e-learning implementation in Nigeria faces several challenges which can be broadly grouped into four categories namely: inadequate infrastructure, inadequate manpower, resistance to change, and inadequate funding. But with uncanny foresight, there is nothing more boring than to listen or watch someone talk for 45 minutes or more in a virtual classroom. On the part of educator, it is a lot of work to prepare for such pedagogy and presentations. On the part of student, most of it would not be remembered. Since auditory modality of learning results in the least amount of recall, designing e-learning pedagogy that are 45 minutes long can be challenging when there is so much content. One must balance the need to cover content with how much

students will remember. Break the lecture into small segments of 18 minutes or less and design some activities in between to make them more meaningful and emotionally engaging for every student.

No doubt, e-learning has some drawbacks, especially when one considers the cost of mobile subscription, poor internet connectivity, and distractions like background noise. However, recent events prove that e-learning will remain a relevant part of students' education. Hence, the sooner we embrace it, the better. One of the most crucial things is to correct the mindset of students. University students should be oriented to take e-learning seriously because it largely boils down to will. As the saying goes, where there is a will, there is a way.

### **Implications for Assuring Quality e-Assessment**

Apparently, assessment sits at the heart of the learning process, as it provides observable evidence of learning, determines student progress and demonstrates understanding of the curriculum. Bennett (2012) argued that the "incorporation of technology into assessment is inevitable" (p.14). Indeed, Bennett goes on to acknowledge that "it is similarly inevitable that incorporation will not be easy" (p. 16). Becoming equally apparent are the challenges and threats that they may also bring. This is particularly the case with their use in assessment, hence, a list of possible affordances or benefits that technology may offer assessment is outlined below, as amalgamated from a number of sources (Pellegrino & Quellmalz, 2010; Winkley, 2010; Whitelock et al., 2006). Assessment with the use of digital technologies has been seen to: provide immediate feedback, potentially increase learners' autonomy, agency and self-regulation, support for collaborative learning, provide authenticity, widen range of measurement, flexible and appropriate responses, increase efficiency and reduce lecturers' workloads, improve student performance, integrate formative and summative assessment, improve assessment validity and reliability (Whitelock et al., 2006).

As Ibrahim (2020) puts it that quality assurance is a planned and systematic review process of how goals of an institution are being achieved, enhanced and sustained; any e-assessment standard designed for the University must minimally achieve the following quality assurance procedures in principle and in practice namely: e-assessment should be orderly, planned, and predictable process. The students have a right to know in advance not only that they would have, say, three tests before the final examination for the semester, session or whatever is the duration of a programme, but they also ought to know whether all the tests will have the same weight or not, and what scores are thereby represented.

Despite prevalent of Covid-19, an e-assessment's evolution and a number of drivers for change in both technology-enhanced learning and shifting models of learning, educational assessment has been notably

slow to adopt innovations or significant changes (Mogey, 2011; Whitelock & Watt, 2008). This reluctance to change could be due to a number of factors namely: the multi-layered changes that assessment requires; restrictions within the assessment system, such as the provision of reliable, systematised and large data sets under heavily scrutinised conditions; and an aversion to the risks that an assessment transformation would inevitably bring (Perrotta & Wright, 2010; Whitelock & Watt, 2008).

## **Conclusion**

In a post-COVID-19 era, more and more universities are pushed into the e-learning environment due to social distancing, new skills and methods of teaching are needed for learning to occur. One cannot just do the same as in the face-to-face environment and expect the same results in the e-learning environment. While many private universities have carried on with academic activities, and even conducted examinations, Nigeria's government-owned universities have crumbled under the weight of the coronavirus pandemic. And the difference is that: private universities have the infrastructure for e-learning while the public ones do not. As far back as 2014, Local Area Network (LAN) is commonplace in the Nigerian tertiary institutions and can be a good platform for distributing and disseminating instructional materials and kick start e-learning. Conclusively, to date, few public universities have video teleconferencing facility, interactive boards, and public address system while internet services are non-existent. Where there are Wi-Fi services, they are unreliable. Many do not have constant electricity supply and the electric generator back-up is not ramifying and often suffers from lack of spare parts and shortage of diesel to run. The minders of education think that e-learning is synonymous with WhatsApp conversation, Facebook interaction, Instagram views and other social platforms. While the potential of ICT use in education is obvious, e-learning is impossible without adequate funding of research and education.

## **Recommendations**

The following are recommended based on the above discussion namely:

1. The near-paralysis of academic and learning activities due to the shutdown of universities points to the increased need for investment in education technology and infrastructure in Nigeria.
2. Nigerian Universities should prepare for the use of virtual learning technology, online instruction and getting students and lecturers to have access to virtual libraries.
3. Lecturers and students should be introduced to the offline e-learning platform to supplement the normal classroom teaching and learning process so that students who do not have access to the internet can benefit.
4. For e-learning to be sustainable, provision should be made on how the less privileged can get access to the use of a computer and afford the expenses involved particularly in data accessibility.

5. The limited amount of electric supply for e-learning activities can be mitigated by using affordable solutions like solar power gadgets, biomass, and human powered electricity which are readily accessible in the country.
6. The university administration also has to set up professional training programmes for Lecturers to improve their digital literacy. Courses needed to improve students' ICT skills can be mounted during the first year at school or during the few weeks of orientation.

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